

1 ttgcaggctg ctgggctggg gctaaggcgt gctcagtttc cttcagcggg gcactggaa
61 gcgccatggc actgcaggcc atctcggtcg tggagctgtc cggcctggcc cggggcccgt
121 tctgtgctat ggtcctggct gacttcgggg cgctgtgggt acgcgtggac cggcccccgt
181 cccgctacga cgtgagccgc ttggggccggg gcaagcgctc gctagtgtc gacactgaagc
241 agccgcgggg agccgcgtg ctgcggcgctc tgtgcaagcg gtcggatgtg ctgctggagc
301 cttccggccg cggtgtcatg gagaaaactcc agctgggccc agagattctg cagcgggaaa
361 atccaaggct tatttatgcc aggctgagtg gatttggcca gtcaggaagc ttctgcccgt
421 tagctggcca cgatatacac tatttggctt tgctagggt tctctaaaa attggcagaa
481 gtggtgagaa tccgtatgcc ccgcgtgaatc tcctggctga ctttgcgtt ggtggccta
541 tgtgtgcact gggcattata atggctctt ttgaccgcac acgcactggc aagggtcagg
601 tcattgatgc aaatatggtg gaaggaacag catatttaag ttctttctg tggaaaactc
661 agaaaatcgag tctgtggaa gcaccccgag gacagaacat gttggatgtt ggagcacctt
721 tctatacgac ttacaggaca gcagatgggg aattcatggc tggtggagca atagaacccc
781 agttctacga gctgctgatc aaaggacttg gactaaagtc tgatgaactt cccaatcaga
841 ttagcatgga tgattggcca gaaatgaaga agaagttgc agatgtatTT gcaaagaaga
901 cgaaggcaga gtgggtgtcaa atctttgacg gcacagatgc ctgtgtgact ccgggtctga
961 ctttgagga ggttggcat catgatcaca acaaggaacg gggctcggtt atcaccagt
1021 aggagcagga cgtgagcccc cgcgcgtcac ctctgcgtt aaacacccca gccatccctt
1081 ctttcaaaag ggatccttca ataggagaac acactgagga gatactgaa gaatttggat
1141 tcagccgcga agagattat cagcttaact cagataaaat cattgaaagt aataaggtaa
1201 aagctagtct ctaacttcca gcccacggc tcaagtgaat ttgaataactg catttacagt
1261 gtagagtaac acataacatt gtatgcattgg aaacatggag gaacagtatt acagtgcct
1321 accactctaa tcaagaaaaag aattacagac tctgattcta cagtgatgat tgaattctaa
1381 aaatggttat cattaggct tttgatttat aaaactttgg gtacttatac taaattatgg
1441 tagttattct gccttccagt ttgcttgata tatttggta tattaagatt cttgacttat
1501 attttgaatg ggttcttagtgg aaaaaggaat gatattttct tgaagacatc gatatacatt
1561 tatttacact cttgattcta caatgttagaa aatgaggaaa tgccacaaat tgtatggta
1621 taaaagtccac gtgaaacaga gtgattgggtt gcatccaggc cttttgtctt ggtgttcatg
1681 atctccctct aagcacatTC caaacttttag caacagttat cacactttgt aatttgcAAA
1741 gaaaagttc acctgtattt aatcagaatg cttcaactg aaaaaaacat atccaaaata
1801 atgaggaaat gtgttggctc actacgtaga gtccagaggg acagtcagtt ttagggttgc
1861 ctgtatccag taactcgggg cctgtttccc cgtgggtctc tgggctgtca gctttctt
1921 ctccatgtgt ttgatttctc ctcaggctgg tagcaagttc tggatctt acccaacaca
1981 cagcaacatc cagaaataaa gttct

FIGURE 1

MALQGISVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSVLSDLKQPRGAAVLRRLCK
RSDVLLEPFRRGVMEKLQLGPEILQRENPRLIYARLSGFQSGSFTRLAGHDINYLALSGLSKIGRSGEN
PYAPLNLLADFAGGGLMCALGIIMALFDRTRTKGQVIDANMVEGTAYLSSFLWKTQKSSLWEAPRGQNML
DGGAPFYTTYRTADGEFMAVGAIEPQFYELLIKGLGLKSDELPNQMSDDWPEMKKFADVFAKKTKAEWC
QIFDGTDACVTPVLTFEVVHHDHNKERGSFITSEEQDVSPRPAPLLLNTPAIPSFKRDFFIGEHTEEILE
EFGFSREEIYQLNSDKIIESNKVKASL

FIGURE 2

FIG. 3

SV1 (AMACR Isoform 1; >FMhx_44226FL01)
GGCGCCGGATTGGGAGGGCTTCTGCAGGCTGCTGGGCTGGGCTAAG
GGCTGCTCAGTTCTTCAGCGGGCACTGGGAAGGCCATGGCACTGCA
GGCATCTCGGTGAGCTGTCCGGCTGGCCCCGGCCGTTCTGTG
CTATGGTCCTGGCTGACTTCGGGCGGTGAGGTACGCGTGGACCAGCCC
GGCTCCGCTACGACGTGAGCCGCTGGGCCGGGAAAGCGCTCGTAGT
GCTGGACCTGAAGCAGCCGCGGGAGCCGCCGTGCTGCCGTCTGTGCA
AGCGGTGGATGTGCTGGAGCCCTCCGCCGGTGTATGGAGAAA
CTCCAGCTGGGCCAGAGATTCTGCAGCAGGAAATCCAAGGCTTATT
TGCCAGGCTGAGTGGATTGCCAGTCAGGAAGCTCTGCCGGTTAGCTG
GCCACGATATCAACTATGGCTTGTCAAGGTGTTCTCAAAAATTGGC
AGAAGTGGTGAGAATCCGTATGCCCGCTGAATCTCTGGCTGACTTG
TGGTGGTGGCCTTATGTGTGCACTGGCATTATAATGGCTCTTTGACC
GCACACGCACTGGCAAGGGTCAGGTCAATTGATGCAAATATGGTGGAAAGGA
ACAGCATATTAAGTTCTTCTGTGGAAAATCAGAAATCGAGTCTGTG
GGAAGCACCTCGAGGACAGAACATGGATGGAGCAGCTTCTATA
CGACTTACAGGACAGCAGATGGGAATTCATGGCTGGAGCAATAGAA
CCCCAGTTCTACGAGCTGATCAAAGGACTGGACTAAAGTCTGATGA
ACTTCCAATCAGATGAGCATGGATGATTGCCAGAAATGAAGAAGAAGT
TTGCAGATGTATTGCAAAGAACGAGACGAGGTGTTCAAATCTT
GACGGCACAGATGCCGTGACTCCGGTCTGACTTTGAGGAGGTTGT
TCATCATGATACAACAAGGAACGGGCTCGTTATCACCAGTGAGGAGC
AGGACGTGAGCCCCGCCGCACCTCTGCTGTTAACACCCCCAGCCATC
CCTCTTCAAAGGGATCCTTCATAGGAGAACACTGAGGAGATACT
TGAAGAATTGGATTCCAGCGGAAGAGATTATCAGCTTAACTCAGATA
AAATCATTGAAAGTAATAAGGTAAAAGCTAGTCTCTAACCTCCAGGCCA
CGGCTCAAGTGAATTGAATACTGCATTACAGTGTAGAGTAACACATAA
CATTGTATGCATGGAAACATGGAGGAACAGTATTACAGTGTCTACCACT
CTAATCAAGAAAAGAATTACAGACTCTGATTCTACAGTGTGATTGAATT
CTAAAAATGGTTATCATTAGGGCTTTGATTATAAAACTTGGTACTT
ATACTAAATTATGGTAGTTATTCTGCCTCCAGTTGCTGATATATTG
TTGATATTAAGATTCTGACTTATATTGAAATGGTTCTAGTAAAAAG
GAATGATATATTCTGAAAGACATCGATATACATTATTACACTCTTGAT
TCTACAATGTAGAAAATGAGGAAATGCCACAAATTGTATGGTATAAAAG
TCACGTGAAACAGAGTGATTGGTGCATCCAGGCCCTTGTCTGGT
CATGATCTCCCTCTAACGACATTCAAACCTTAGCAACAGTTATCACACT
TTGTAATTGCAAAGAAAAGTTCACCTGTATTGAATCAGAAATGCC
ACTGAAAAAAACATATCCAAAATAATGAGGAAATGTGTTGGCTCACTACG
TAGAGTCCAGAGGGACAGTCAGTTAGGGTGCAGCTTCTCC
GGGGCCTGTTCCCCGTGGTCTCTGGCTGTCAGCTTCTCC
GTGTTGATTCTCCTCAGGCTGGTAGCAAGTTCTGGATCTTACCCAA
CACACAGCAACATCCAGAAATAAGATCTCAGGACCCCCAAAAAA
AAAAAAAAAAAAAA (SEQ ID NO:4)

FIG. 4

SV1 (>FMhx_m_44226FL01_P1)
MALQGISVVELSGLAPGPFCAMVLADFGARVVRDRPGSRYDVSRLGRGKRSLVLDLKQP
RGAAVLRRLCRSDVLLPFRRGVMEKLQLGPEILQRENPRLIYARLSGFGQSGSFCRLA
GHDINYLALSGVLSKIGRSGENPYAPLNLLADFAGGGLMCALGIIMALFDRTRTKGQVI
DANMVEGTAYLSSFLWKTQKSSLWEAPRGQNMLDGGA~~P~~FYTTYRTADGEFMAVGAI~~E~~PQF
YELLIKGLGLKSDELPNQMSMDDWPEMKKFADVFAKKTKA~~E~~WCQIFDGTDACVTPVLTF
EEVVHHDHNKERGSFITSEEQDVSPRPAPLLNTPAIPSFKRDPFIGEHTEEILEEFGFS
REEIYQLNSDKIIESNKVKASL (SEQ ID NO:5)

FIG. 5A

SV2 (AMACR Isoform 2; >FMhxm_44226FL02

GGCGCCGGATTGGGAGGGCTTCTGCAGGCTGCTGGCTGGGCTAAG
GGCTGCTCAGTTCTTCAGCGGGCACTGGGAAGCGCCATGGCACTGCA
GGGCATCTCGGTGAGCTGTCCGGCCTGGCCCCGGGCCCTGTG
CTATGGCCTGGCTGACTTCGGGCGGTGGTACCGTGACGGGCCC
GGCTCCGCTACGACGTGAGCCGCTGGGCCGGCAAGCGCTCGCTAGT
GCTGGACCTGAAGCAGCCGGGGAGCCGCCGTGCTGCCGTCTGTGCA
AGCGGTGGATGTGCTGGAGCCCTCCGCCGGTGTATGGAGAAA
CTCCAGCTGGCCCAGAGATTCTGCAGCGGGAAATCCAAGGCTTATT
TGCCAGGCTGAGTGGATTGGCCAGTCAGGAAGCTCTGCCGGTAGCTG
GCCACGATATCAACTATTGGCTTGTCAAGGTGTTCTCTCAAAATTGGC
AGAAGTGGTGAGAATCCGTATGCCCGCTGAATCTCCTGGCTGACTTG
TGGTGGTGGCCTATGTGTGCACTGGCATTATAATGGCTCTTTGACC
GCACACGCACTGGCAAGGGTCAGGTCAATTGATGCAAATATGGTGGAAAGGA
ACAGCATATTAAAGTTCTTCTGTGGAAAACCTAGAAATCGAGTCTGTG
GGAAGCACCTCGAGGACAGAACATGTTGGATGGTGGAGCACCTTCTATA
CGACTTACAGGACAGCAGATGGGAATTCATGGCTGTTGGAGCAATAGAA
CCCCAGTTCTACGAGCTGATCAAAGGACTTGGACTAAAGTCTGATGA
ACTTCCAATCAGATGAGCATGGATGATTGGCCAGAAATGAAGAAGAAGT
TTGCAGATGTATTGCAAAGAACGAGCAGGGCAGAGTGGTGTCAAATCTT
GACGGCACAGATGCCGTGTGACTCCGGTCTGACTTTGAGGAGGTTGT
TCATCATGATCACACAAGAACGGCTCGTTATCACCAGTGAGGAGC
AGGACGTGAGCCCCGCCCTGCACCTCTGCTGTTAACACCCCCAGCCATC
CCTTCTTCAAAAGGATCCTTCATAGGAGAACACACTGAGGAGATACT
TGAAGAATTGGATTCAAGCCGCAAGAGATTATCAGCTTAACTCAGATA
AAATCATTGAAAGTAATAAGGCTGGTAGCAAGTTCTGGATCTTACCCA
ACACACAGCAACATCCAGAAATAAGATCTCAGGACCCCCCAGCAAGTCG
TTTGTGTCTCCTGGACTGAGTTAACAGCCTTCTTACCTGT
CTTGACAAAGAACGAGCAGGGATTGTCTTACATAAAACCAGCCTGCTCCTG
GAGCTCCCTGGACTCAACTCCTAAAGGCATGTGAGGAAGGGTAGATT
CCACAATCTAACCGGGGCCATCAGAGTAGAGGGAGTAGAGAACGGATG
TTGGTAGGCCATCAATAAGGTCCATTCTGCGCAGTATCTCAACTGCCGT
TCAACAATCGCAAGAGGAAGGTGGAGCAGGTTCTCATCTTACAGTTGA
GAAAACAGAGACTCAGAACGGCTTCTTAGTTCACTGTTCCCTAGCGCCT
CAGTGAATTTCATGGTGGCTAGGCCAAAAGAAATATCTAACCAATTCA
ATTATAAAATAATTAGGTCCCCAACGAATTAAATATTATGTCTACCAAC
TTATTAGCTGCTGAAAAATAATAACACATAAAATAAAATATATT
TCATTTCTATTCATTGTTAACACAACTACTTAAGGAGATGTATGC
ACCTATTGGACACTGTGCAACTTCTCACCTGGAATGAGATTGGACACTGC
TGCCCTCATTCTGCTCCATGTTGGTGTCCATATAGTACTTGATT
ATCAGATGGCTGGAAAACCCAGTCTCACAAAATATGAAATTATCAGAA
GGATTATAGTGCACATTATGTTGAAAGAACATGAACTACCTCACTAGTAGT
TCACGTGATGTCTGACAGATGTTGAGTTCACTGTTGTGTGTTCAA
TTTTAAATATTCTGAGATACTCTGTGAGGTCACTCTAACGCCCTGGGT
GCCTTGGCACAGTTAGAAATACCAAGTTGAAAATATTGCTCAGGAATA
TGCAACTAGGAAGGGCAGAACATCAGAACATTAAAGCTTCAATTCTAGCCT
TCAGTCTGTTCTCAACCATTAGAACCTTCCATAAGGTTATGTT
TTCCAGCCCAGGCATGGAGGATCACTTGAGGCCAACAGAGTCGAGACCAGC
CTGGGGAACTTGGCTGGACCTCCGTTCTACGAAATAAAAATAAAAAT
TATCCAGGTATGGTGGTGTGCTAGTCCTATCTACTCAAGGGTGGG

FIG. 5B

GCAGGAGGGATCACTTGAGCCCAGGAATTGAGGCCACAGTGAATTAGGAT
TGCACCACTGCACTCTAGCCCAGGCAACAGAACAAAGAACCTGTCTCTAAA
TAAATAAATAAAAAATAATAATAATAAAAAAGATGTTTCCCTACAAAAAA
GACTTTCATTTGAACACTCGGTCCAGCAAGGAAAATAACCCACTCGAAG
TCTTTAAAACAGAGGAAATTAAATATAAGAATTCCACTGGTGACGAAAG
AGCAGAGAAGGCCAGAAGATAGTGAGGCAACCCTGATAGGAACATAACTA
GGAAGCCAAGACCCTCCTATGGTGCAGGGGTGATGGGAAAGCTGGTGT
ACTTGGACCCAGAACCAAAGTTGCTGCACCCACCTGGAGACATAGACA
CTGGCAGTAATACCTCAGGGAGAAGAAAGAAATCTAGGGAAATATCCTGG
CTTCTTCCTCTCTCTCCCTAGTCTCCTACCAAGTGTCTCCCATT
GCCAAATCTACCTAGAACGCCAGAAAACAAGGGAACCTGGAAATGTAGCC
CCATAAGATAAAGAGCACCAAAGGAAATAGATCTGAGCAGACAGGCAGCA
CAAAATGCAGTGTGTATGGTTATTCACTCAGTAATTCTTAGCAAATG
TTTATTGAGGATCTACTAGGTGCCAGGTATCATGATACTTGCTGGGATA
CCATAATGAACAAAACAGACCTGTTCTCCGCTCTGAGGAAATCAAAGAC
AAACACAGGATATGGAATAAACCCAGAATTATCTCATTGTAAAATGTGTT
AAGTACCAACGAGGAGAAATATCAGGGCCATCTGACACAGCTAATGATTG
AAGAAGGGTGTGACCTGCCACCATTAAATCTAGTTATTCACTCCTGA
GCTGTGTGTGGAAAATTGTAGTAAAAAATAGAATGTCTATATTATA
AAAAGTTATGAAAAGATATCAATTATTACATTGACAAACTCTATG
TAATAAGGCTTATTACTCACGGCCATGTGTGTGATCATGTGAATAGCA
TGTGTGTATGAGAGAGAGAACCATATGTAATTATGTGTAAATAACGTCTG
TGAGAGAGAACCATGTGTGTGATCATGTAAAATAACGTGTGAGAGAA
GCCATGTGTGTGATCGTGTAAAATAACGTGTGAGAAGCCGTGTGAT
GTGT (SEQ ID NO:6)

FIG. 6

SV2 (>FMhXm_44226FL02_P1)

MALQGISVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSVLVDLKQP
RGAAVLRLCKRSDVLLEPFRRGVMEKLQLGPEILQRENPRLIYARLSGFGQSGSFcRLA
GHDINYLAISGVLSKIGRSGENPYAPLNLLADFAGGGLMCALGIIMALFDRTRTDKQVI
DANMVEGTAYLSSFLWKTQKSSLWEAPRGQNMLDGGAPEFYTTYRTADGEFMAVGAIIEPQF
YELLIKGGLKSDELPNQMSDDWPEMKKFADVFAKKTKAECQIFDGTDACVTPVLT
EEVVHHDHNKERGSFITSEEQDVSPRPAPLLNTPAIPSFKRDFIGEHTEEILEEFGFS
REEIYQLNSDKIIESNKAGSKFWILYPTHSNIQK (SEQ ID NO: 7)

FIG. 7A

SV3 (AMACR Isoform 3; >FMhx_m_44226FL03)

GGCGCCGGATTGGGAGGGCTTCTGCAGGCTGCTGGGCTGGGCTAAG
GGCTGCTCAGTTCTTCAGCGGGCACTGGGAAGCGCCATGGCACTGCA
GGGCATCTCGGTGAGCTGTCCGGCCTGGCCCCGGGCCCTGTG
CTATGGTCCTGGCTGACTTCGGGCGGTGGTACCGTGACCGGCC
GGCTCCCGCTACGACGTGAGCCGCTGGCCGGCAAGCGCTCGCTAGT
GCTGGACCTGAAGCAGCCGGGAGCCGCCGTGCTGCCGTCTGTGCA
AGCGGTGGATGTGCTGGAGCCCTCCGCCGGTGTCAAGGAGAAA
CTCCAGCTGGCCCAGAGATTCTGCAGCGGGAAAATCCAAGGCTTATT
TGCCAGGCTGAGTGGATTGGCCAGTCAGGAAGCTCTGCCGGTTAGCTG
GCCACGATATCAACTATTGGCTTGTCAAGTGGAAAGAACAGCATATT
AAGTTCTTTCTGTGAAAACAGAAATCGAGTCTGTGGGAAGCACCTC
GAGGACAGAACATGTTGGATGGAGCACCTTCTATACGACTTACAGG
ACAGCAGATGGGAATTCACTGGCTGTTGGAGCAATAGAACCCAGTTCTA
CGAGCTGCTGATCAAAGGACTGGACTAAAGTCTGATGAACTCCCAATC
AGATGAGCATGGATGATTGGCCAGAAATGAAGAAGAAGTTGCAGATGTA
TTGCAAAGAACGAAGGCAGAGTGGTGTCAAATCTTGACGGCACAGA
TGCCTGTGACTCCGGTTCTGACTTTGAGGAGGTTGTTCATCATGATC
ACAACAAGGAACGGGCTCGTTATCACCAGTGAGGAGCAGGACGTGAGC
CCCCGCCCTGCACCTCTGCTGTTAACACACCCAGCCATCCCTCTTCAA
AAGGGATCCTTCATAGGAGAACACACTGAGGAGATACTGAAGAATTG
GATTAGCCCGAAGAGATTATCAGCTTAACTCAGATAAAATCATTGAA
AGTAATAAGGTTAAAGCTAGTCTAACTTCCAGGCCACGGCTCAAGTG
AAITTGAATACTGCATTACAGTGTAGAGTAACACATAACATTGTATGCA
TGGAAACATGGAGGAACAGTATTACAGTGTCTTACACTCTAAAGAA
AAGAATTACAGACTCTGATTCTACAGTGATGATTGAATTCTAAAAATGGT
TATCATTAGGGCTTTGATTATAAAACTTGGTACTTATACTAAATT
TGGTAGTTATTCTGCCCTCCAGTTGCTTGTATATTGTTGATATTAAAG
ATTCTGACTTATATTGAAATGGTTCTAGTGAAAAAGGAATGATATAT
TCTTGAAGACATCGATATACATTACACTCTGATTCTACAATGTA
GAAAATGAGGAAATGCCACAAATTGTATGGTATAAAAGTCACGTGAAAC
AGAGTGATTGGTTGCATCCAGGCCTTGTCTGGTGTCACTGATCTCCC
TCTAACGACATTCCAAACTTAGCAACAGTTACACACTTGTAAATTGC
AAAGAAAAGTTCACCTGTATTGAATCAGAACGCTTCAACTGAAAAAAA
CATATCCAAAATAATGAGGAAATGTGTTGGCTCACTACGTAGAGTCCAGA
GGGACAGTCAGTTAGGGTTGCCTGTATCCAGTAACCTGGGCTGTT
CCCCGTGGGTCTCTGGGCTGTCAGCTTCTTCTCCATGTGTTGATT
CTCCTCAGGCTGGTAGCAAGTTCTGGATCTTACCCAACACACAGCAAC
ATCCAGAAATAAGATCTCAGGACCCCCCAGCAAGTCGTTGTCTCC
TTGGACTGAGTTAACAGCTTACAAAGCCTTCTTACCTGTCTTGACAAAGA
AGACGGGATTGTCTTACATAAAACCAGCCTGCTCCTGGAGCTCCCTGG
ACTCAACTCCTAAAGGCATGTGAGGAAGGGTAGATTCCACAATCTAAT
CCGGGTGCCATCAGAGTAGAGGGAGTAGAGAACGGATGTTGGTAGGCCA
TCAATAAGGTCCATTCTCGCGAGTATCTCAACTGCCGTTCAACAATCGCA
AGAGGAAGGTGGAGCAGGTTCTCATCTTACAGTTGAGAAAACAGAGAC
TCAGAAGGGCTTCTTAGTTCATGTCTTCCCTAGCGCCTCAGTGATTTTT
CATGGTGGCTTAGGCCAAAGAAATATCTAACCATTCATTTATAAATAA
TTAGGTCCCCAACGAATTAAATTATGTCCTACCAACTTATTAGCTGCT
TGAAAAATATAATACACATAAAATAAAAAATATTTTCATTCTATT
CATTGTTAACACAACTTACTAAGGAGATGTATGCACCTATTGGACA

FIG. 7B

CTGTGCAACTCTCACCTGGAAATGAGATTGGACACTGCTGCCCTCATT
CTGCTCCATGTTGGTGTCCATATAGTACTTGATTTTATCAGATGGCCT
GGAAAACCCAGTCTCACAAAAATATGAAATTATCAGAAGGATTATAGTGC
AATCTTATGTTGAAAGAACGAACTACCTCACTAGTAGTCACGTGATGTC
TGACAGATGTTGAGTTCATGTTGTGTTCAAATTTAAATATT
CTGAGATACTCTTGTGAGGTCACTCTAACATGCCCTGGTGCCTGGCACAG
TTTAGAAATACCAAGTTGAAAATATTGCTCAGGAATATGCAACTAGGAA
GGGGCAGAATCAGAATTAAAGCTTCATATTCTAGCCTTCAGTCTGTT
CTTCAACCATTAGGAACCTTCCCATAAGTTATGTTCCAGCCCAG
GCATGGAGGATCACTTGAGGCCAAGAGTTCGAGACCAGCCTGGGAACCT
GGCTGGACCTCCGTTCTACGAAATAAAATAAAATTATCCAGGAAA
AAAAAAAAAAAAAAAAAAAAAAA (SEQ ID NO:8)

FIG. 8

SV3 (>FMhxm_44226FL03_P1)

MALQGI SVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSVLVDLKQP
RGAAVLRRRLCKRSVDVLEPFRRGVM EKLQLGPEILQRENPR LIYARLSGFQSGSF CRLA
GHDINYLA LSGGRNSIFKFFSVENSEIESVGSTS RTEHVGWWSTFLYDLQDSRWGIHGCW
SN RTPVLRAADQRTWTKV (SEQ ID NO:9)

FIG. 9

SV4 (AMACR Isoform 4; >gi|14725916|ref|XM_043772.1| Homo sapiens alpha-methylacyl-CoA racemase (AMACR), mRNA)

TTGCAGGCTGCTGGCTGGGCTAACGGCTGCTCAGTTCCCTCAGCGGG
GCACTGGGAAGGCCATGGCACTGCAGGGCATCTCGGTGAGCTGTC
CGGCCTGGCCCCGGCCGTTCTGTGCTATGGTCTGGCTGACTCGGGG
CGCGTGTGGTACCGTGGACCGGCCGGCTCCCGCTACGACGTGAGCCGC
TTGGGCCGGGCAAGCGCTCGCTAGTGCTGGACCTGAAGCAGCCGGGG
AGCCGCCGTGCTGCCGTCTGTGCAAGCGGTGGATGTGCTGCTGGAGC
CCTTCCGCCGCGGTGTCATGGAGAAACTCCAGCTGGCCCAGAGATTCTG
CAGCGGGAAAATCCAAGGCTTATTATGCCAGGCTGAGTGGATTGGCCA
GTCAGGAAGCTCTGCCGGTTAGCTGCCACGATATCAACTATTGGCTT
TGTCAAGGTGTTCTCTAAAAATTGGCAGAAGTGGTGAGAATCCGTATGCC
CCGCTGAATCTCCTGGCTGACTTGCTGGTGGCCTATGTGTGCACT
GGGCATTATAATGGCTCTTTGACCGCACACGCACTGGCAAGGGTCAGG
TCATTGATGCAAATATGGTGAAGGAACAGCATTTAAGTTCTTTCTG
TGGAAAACTCAGAAATCGAGTCTGTGGGAAGCACCTCGAGGACAGAACAT
GTTGGATGGTGGAGCACCTTCTATCGACTTACAGGACAGCAGATGGGG
AATTCAATGGCTGTTGGAGCAATAGAACCCCAGTTCTACGAGCTGCTGATC
AAAGGACTTGGACTAAAGTCTGATGAACTCCCAATCAGATGAGCATGGA
TGATTGGCCAGAAATGAAGAAGAAGTTGCAGATGTATTGCAAAGAAGA
CGAAGGCAGAGTGGTGTCAAATCTTGACGGCACAGATGCCTGTGACT
CCGGTTCTGACTTTGAGGAGGTTGTCATCATGATCACAACAAGGAACG
GGGCTCGTTATCACCAGTGAGGAGCAGGACGTGAGCCCCGCCCTGCAC
CTCTGCTGTTAACACACCCAGCCATCCCTCTTCAAAAGGGATCCTTTC
ATAGGAGAACACACTGAGGAGACTTGAAGAATTGGATTCAAGCCGCGA
AGAGATTATCAGCTTAACTCAGATAAAATCATTGAAAGTAATAAGGTA
AAGCTAGTCTCTAACCTCCAGGCCACGGCTCAAGTGAATTGAATACTG
CATTACAGTAGAGTAACACATAACATTGTATGCATGAAACATGGAG
GAACAGTATTACAGTGTCTACCCTAATCAAGAAAAGAATTACAGAC
TCTGATTCTACAGTGATGATTGAATTCTAAAAATGGTTATCATTAGGGCT
TTGATTATAAAACTTGGTACTTATAACTAAATTATGGTAGTTATTCT
GCCTTCAGTTGCTTGATATATTGTTGATATTAAGATTCTGACTTAT
ATTTGAATGGGTTCTAGTGAAAAAGGAATGATATATTCTGAAGACATC
GATATACATTATTTACACTCTTGATTCTACAATGTAGAAAATGAGGAAA
TGCCACAAATTGTATGGTATAAAAGTCACGTGAAACAGAGTGATTGGTT
GCATCCAGGCCTTGTCTGGTGTTCATGATCTCCCTCTAACGCACATT
CAAACCTTAGCAACAGTTATCACACTTGTAAATTGCAAAGAAAAGTT
ACCTGTATTGAATCAGAACATGCCTCAACTGAAAAAAACATATCCAAAATA
ATGAGGAAATGTGTTGGCTCACTACGTAGAGTCCAGAGGGACAGTCAGTT
TTAGGGTTGCCTGTATCCAGTAACCTGGGGCCTGTTCCCCGTGGGTCTC
TGGGCTGTCAGCTTCCTTCTCCATGTGTTGATTCTCCTCAGGCTGG
TAGCAAGTTCTGGATCTTACCCAACACACAGCAACATCCAGAAATAAA
GATCT (SEQ ID NO:10)

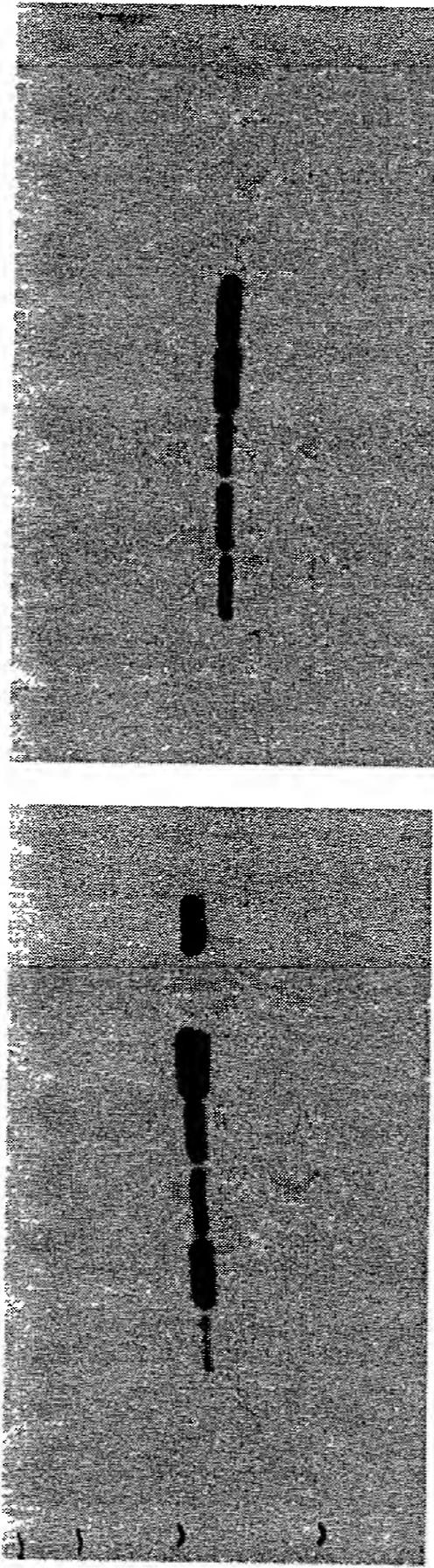
FIG. 10

SV3 (>gi|14725917|ref|XP_043772.1| alpha-methylacyl-CoA
racemase [Homo sapiens])

MALQGISVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSVLSDLKQP
RGAAVLRRLCRSDVLEPFRRGVMEKLQLGPEILQRENPRLIYARLSGFGQSGSFCRLA
GHDINYLAISGVLSKIGRSGENPYAPLNLLADFAGGGLMCALGIIMALFDRTRTGKGQVI
DANMVEGTAYLSSFLWKTQKSSLWEAPRGQNMLDGGAPFYTTYRTADGEFMAVGAIEPQF
YELLIKGLGLKSDELPNQMSMDDWPEMKKFADVFAKKTKAECQIFDGTDACVTPVLTF
EEVVHHDHNKERGSFITSEEQDVSPRPAPLLLNTPAIPSFKRDPFIGEHTEEILEEFGFS
REEIYQLNSDKIIIESNKVKASL (SEQ ID NO:11)

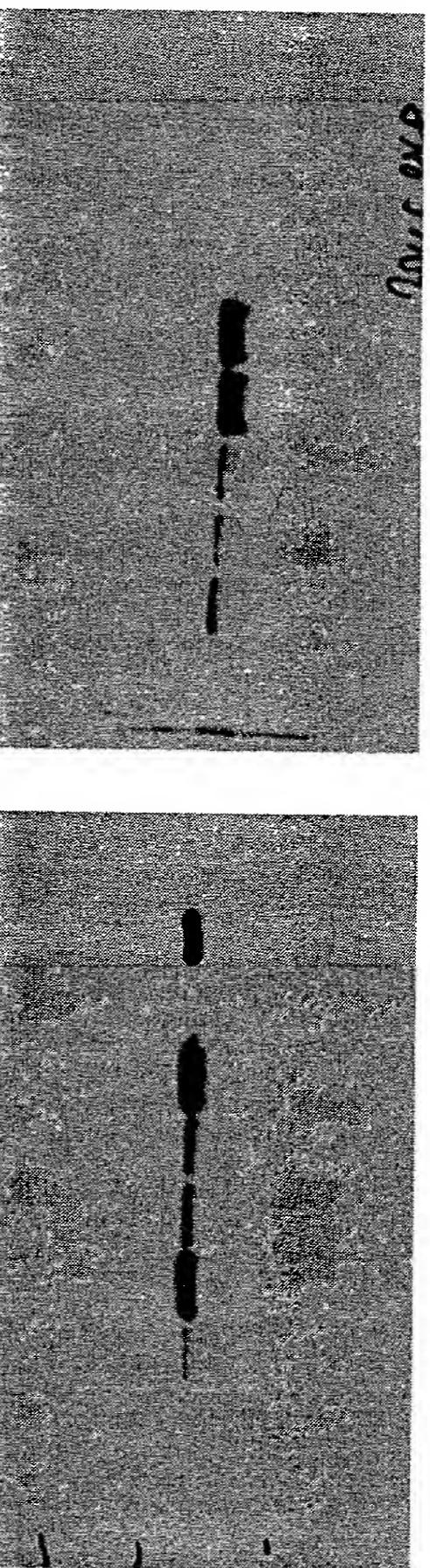
1) normal prostate
 2) prostate adenocarcinoma
 3) prostate adenocarcinoma
 4) lymph node met (prost)
 5) liver met (prost)
 6) liver met (prost)
 7) normal colon
 8) colon adenocarcinoma
 9) liver met (colon)
 10) normal liver
 11) normal kidney
 12) normal kidney
 13) normal brain
 14) normal muscle
 15) normal muscle

1 2 3 4 5 6 + 7 8 9 10 11 12 13 14 15



ML 185

1 2 3 4 5 6 + 7 8 9 10 11 12 13 14 15



ML 186

Normal

Muscle

ML 186

ML 185

Normal

Muscle

ML 185

Normal

Muscle

ML 186

Normal

Muscle

ML 185

</div

FIG. 12

Racemace splice variants identified by sequencing of IMAGE clones

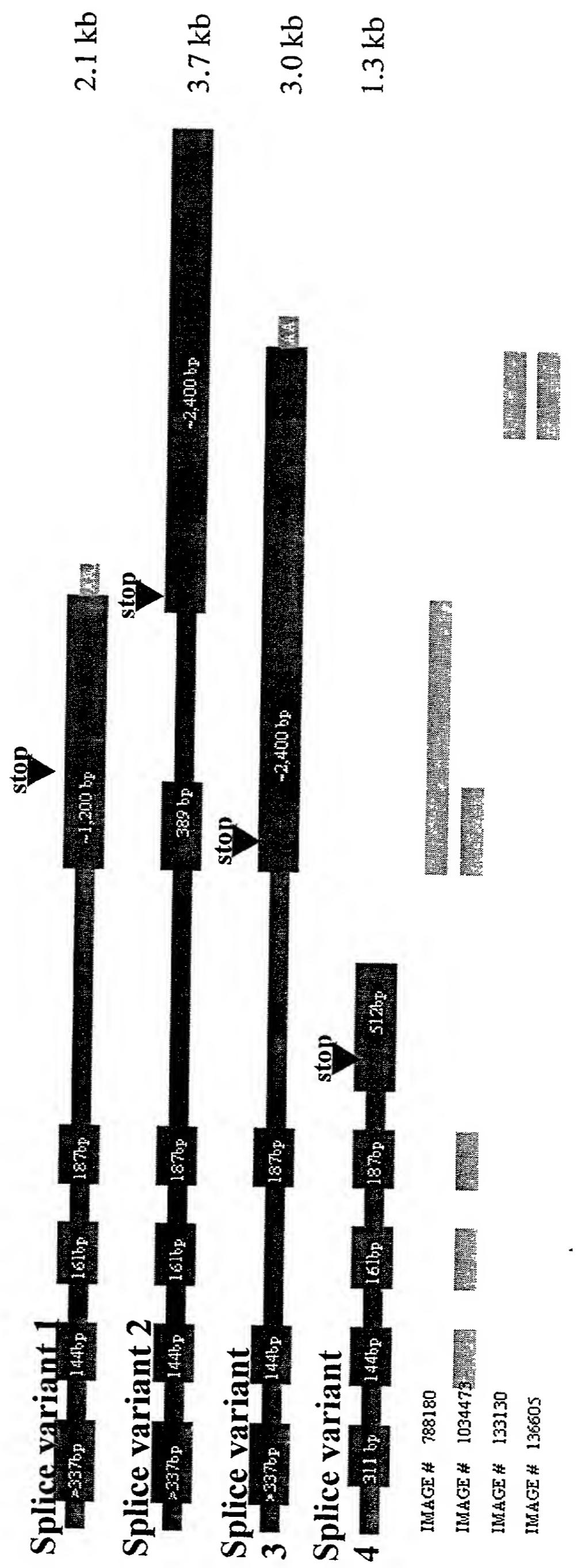


FIG. 13

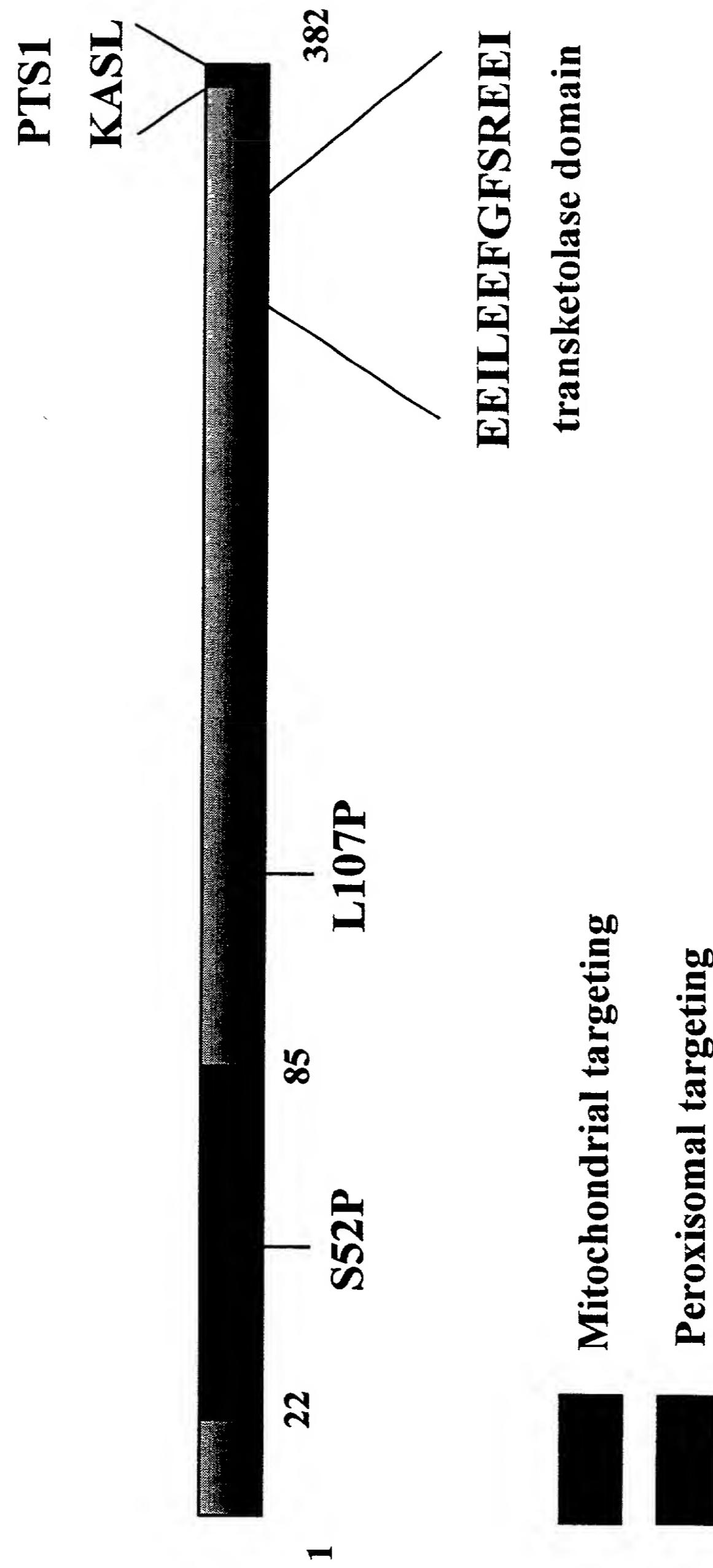


IMAGE clone 136605

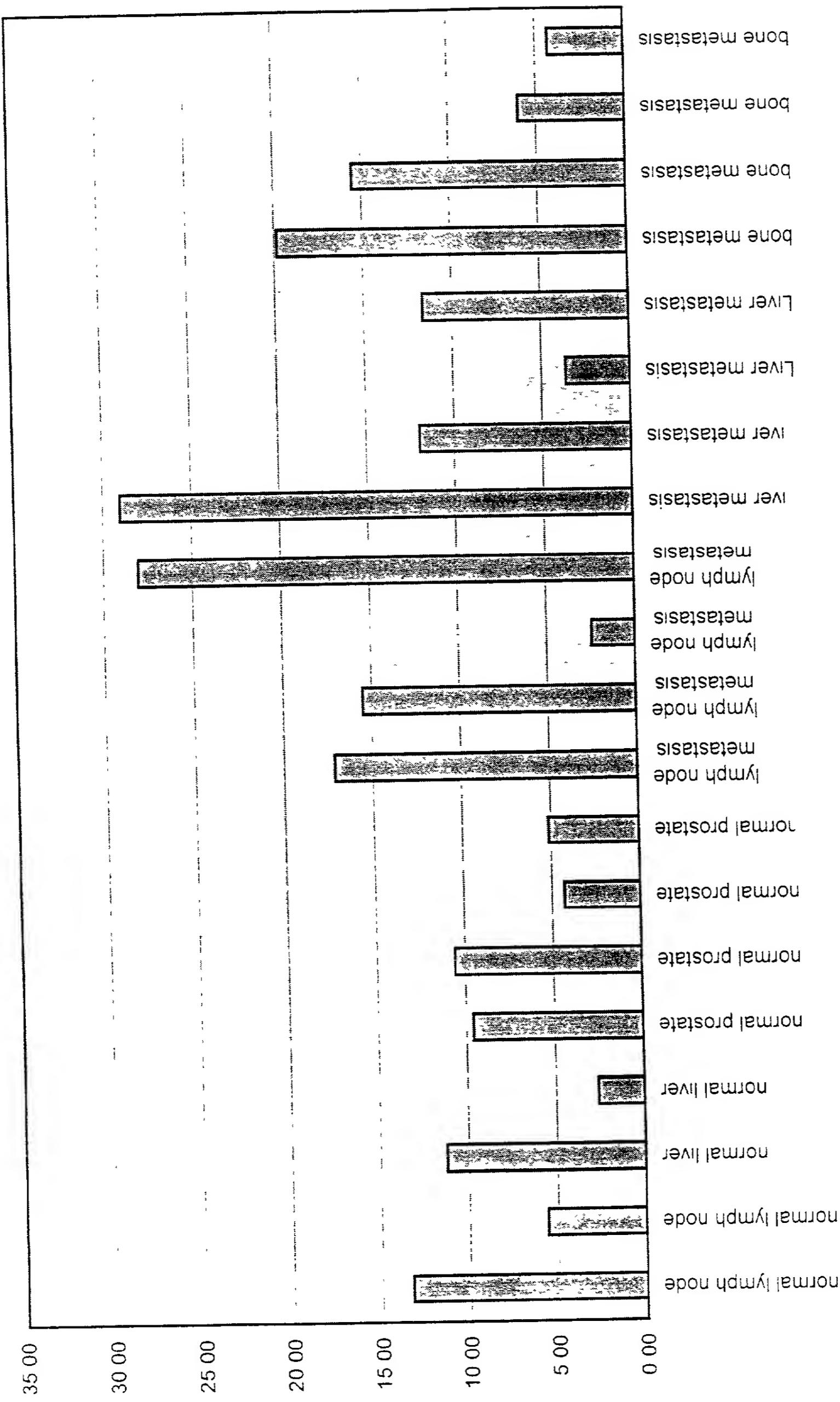


FIG. 14A

IMAGE clone 133130

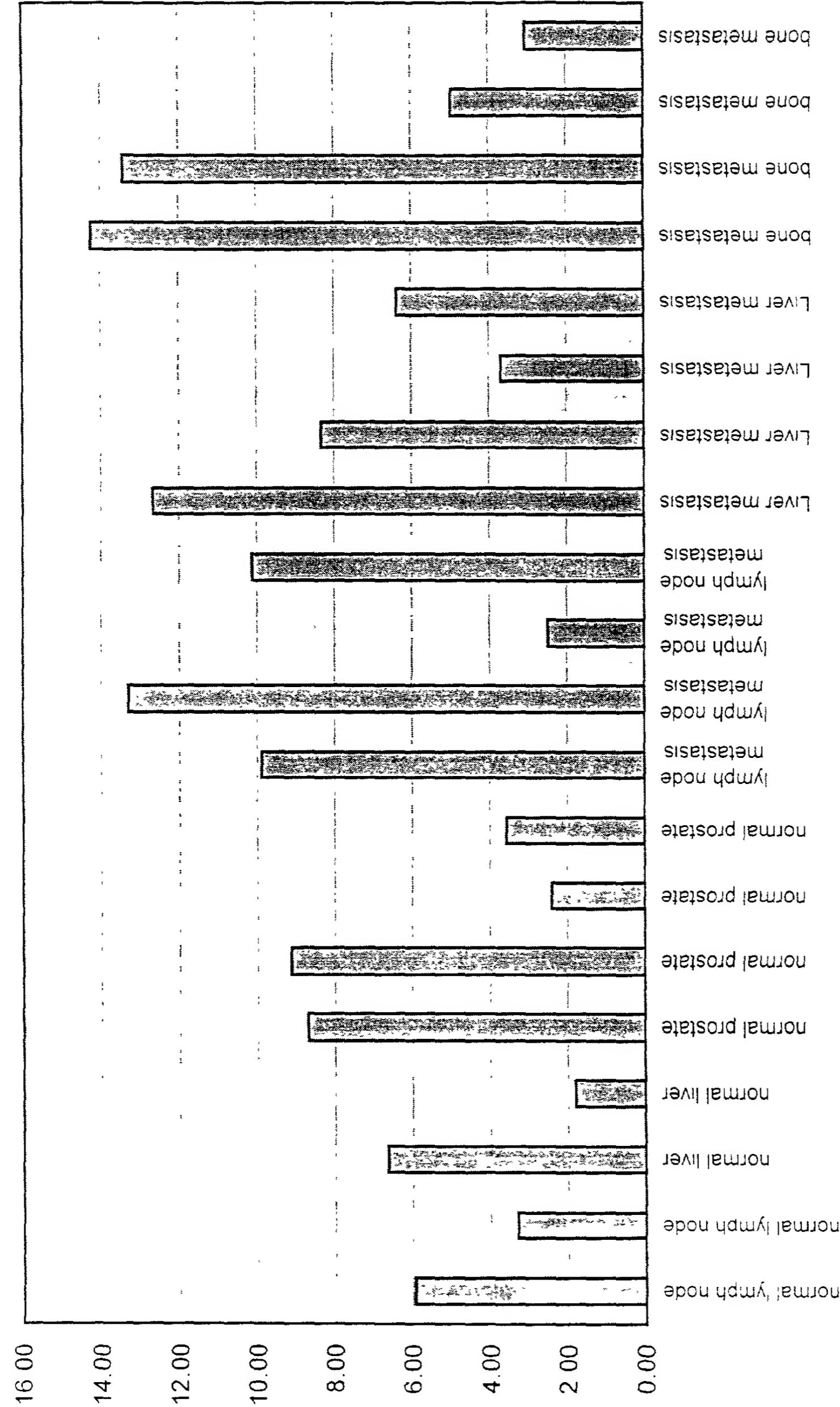


FIG. 14B

IMAGE clone 1034473: MID=44226 alpha-methylacyl-CoA racemase

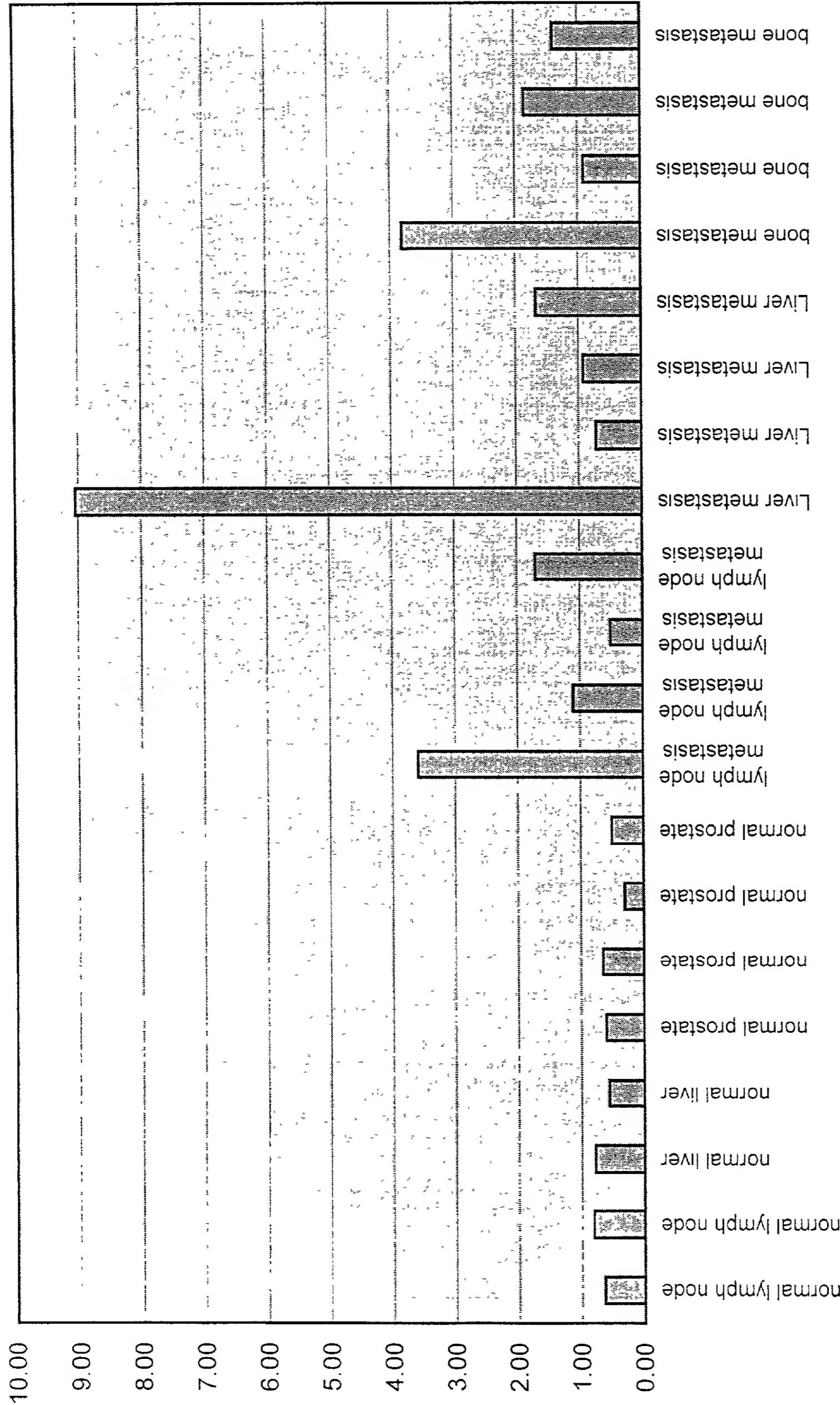


FIG. 14C

IMAGE clone 788180: MID=44226 alpha-methylacyl-CoA racemase

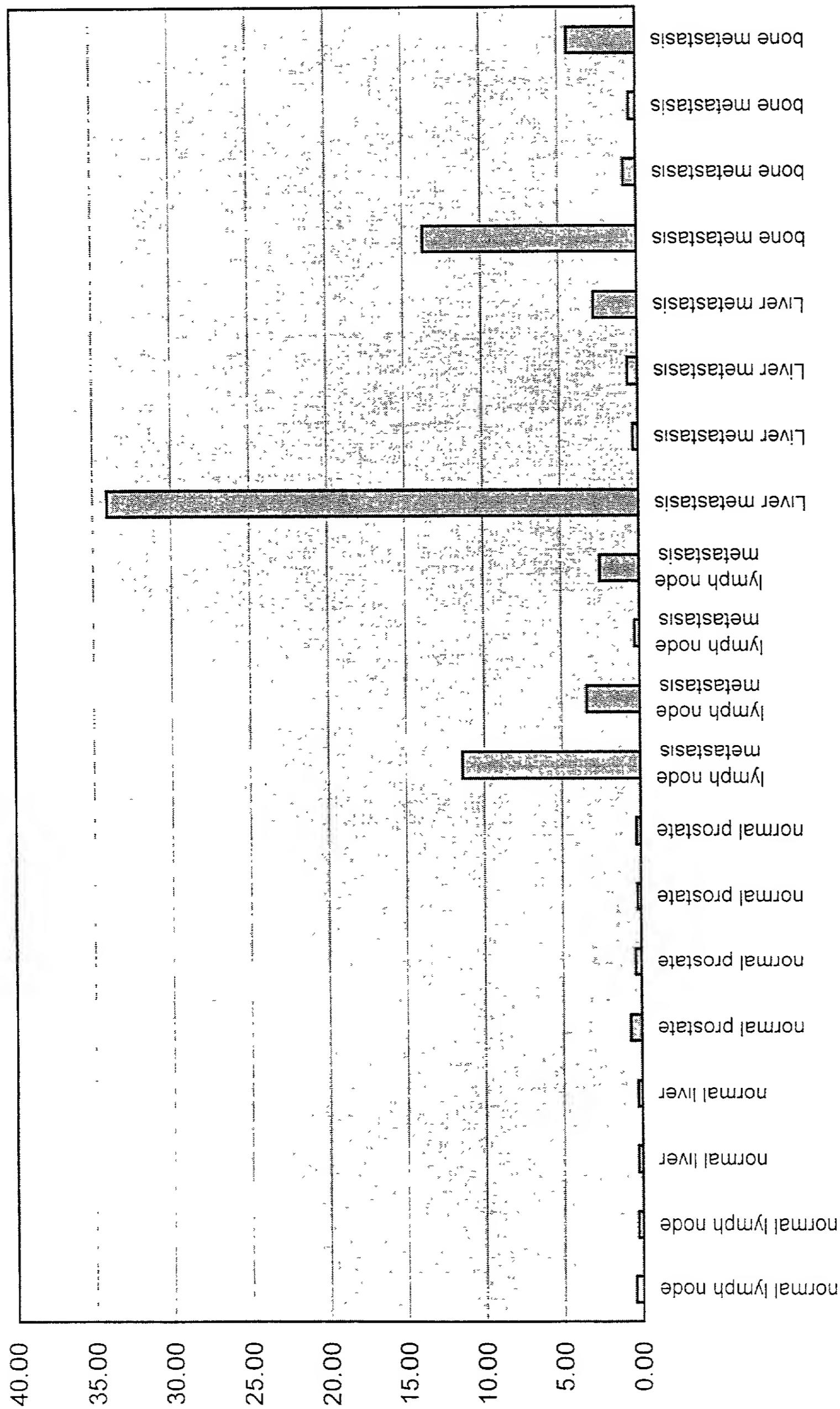


FIG. 1^{4D}